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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,031	11/26/2003	Eric S. Bornstein	born40587	8863

7590 02/21/2007  
Simona A. Levi-Minzi, Ph.D.  
McDermott Will & Emery LLP  
201 South Biscayne Boulevard  
Suite 2200  
Miami, FL 33131

EXAMINER
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BUMGARNER, MELBA N

ART UNIT	PAPER NUMBER
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3732

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/723,031

Applicant(s)

BORNSTEIN, ERIC S.

Examiner

Melba Bumgarner

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 12 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claim 11 is objected to because of the following informalities: not complete sentence. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Jacoby (5,328,365). Jacoby discloses a dental instrument comprising a hollow shank 14 having a rearward fitting, a forward head 16 including a contact region 28 and a window 46, the contact region being adapted for scraping, a source of infrared laser energy (column 14 line 1), the source capable of being configured to produce laser energy for photothermal effect, the window being transmissive with respect to the laser energy, a fiber optic bundle (column 14 line 6) extending from the source through the fitting and shank, the instrument is capable of being configured and arranged to enable simultaneous use to scrape and to destroy residual bacteria with laser energy (column 10 line 27, column 14 line 25) as seen in figure 3b. Jacoby shows the laser device transmitting laser energy of Nd:YAG laser (column 14 line 34), which is known to lase in the infrared region, such as about 1060nm. Jacoby shows the laser energy passing onto subgingival tooth surfaces or tissues. Jacoby shows the contact region is a sickle scaler, curette, hoe scaler, chisel scaler, or file scaler (column 2 line 52).

4. Claims 1-6, 9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Teumim-Stone (5,090,908). Teumim-Stone discloses a dental instrument comprising a shank having a rearward fitting, a forward head including a contact region and a sapphire window (figures 5-7), the contact region being adapted for scraping (column 6 line 56), a source of infrared laser energy (column 6 line 3), the source capable of being configured to produce laser energy for photothermal effect, the window being transmissive with respect to the laser energy, a fiber optic bundle (column 6 line 18) extending from the source through the fitting and shank, the instrument is capable of being configured and arranged to enable simultaneous use to scrape and to destroy bacterial with laser energy. Teumim-Stone shows the laser device transmitting laser energy of Nd:YAG laser, which is known to lase in the infrared region, such as about 1060 nm. Teumim-Stone shows the contact region which can be called a sickle scaler, curette, hoe scaler, chisel scaler, or file scaler. Teumim-Stone discloses a process of applying the dental instrument above to subject a surgical site (column 1 line 10) simultaneously to cutting and laser energy for photothermal effect and trimming and cauterization to remove diseased tissue and to destroy residual bacteria (column 5 line 52 – column 6 line 58, column 1 line 42).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacoby in view of Andersen et al. (2003/0059379). Jacoby discloses a dental instrument that shows the limitations

as described above; however, Jacoby does not show the laser energy of a diode laser in the approximate vicinities of 870 nm and 930 nm. Andersen et al. teach dental instrument comprising a multi-wavelength diode laser in the infrared region of about 800 to 980 nm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the laser device of Jacoby to have the diode laser of Andersen et al. in order to utilize a laser that is much less expensive than other lasers such as YAG and CO<sub>2</sub> as taught by Andersen et al.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teumim-Stone in view of Andersen et al. Teumim-Stone discloses a dental instrument that shows the limitations as described above; however, Teumim-Stone does not show the laser energy of a diode laser in the approximate vicinities of 870 nm and 930 nm. Andersen et al. teach dental instrument comprising a multi-wavelength diode laser in the infrared region of about 800 to 980 nm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the laser device of Teumim-Stone to have the diode laser of Andersen et al. in order to utilize a laser that is much less expensive than other lasers such as the YAG and CO<sub>2</sub> as taught by Andersen et al.

***Allowable Subject Matter***

8. Claims 10 and 12 are allowed.

***Response to Arguments***

9. Applicant's arguments filed have been fully considered but they are not persuasive. The claimed structural limitations of the dental instrument of the rejected claims are shown in the prior art. A recitation of the intended use of the claimed invention must result in a structural

difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Applicant does not show that a source configured and arranged to produce laser energy for photodamage or photothermal effect to destroy residual bacteria is structurally different from a source configured and arranged for trimming or cauterizing to remove diseased tissue, and a dental instrument configured and arranged to enable simultaneously cutting and applying laser energy for photodamage or photothermal effect is structurally different from a dental instrument configured and arranged for simultaneously cutting, and trimming and cauterizing to remove diseased tissue. As to arguments to Jacoby reference that lasers are disclosed for only illumination sources, it is noted that Jacoby shows dental instrument with alternative configurations of the optical head comprising optional lasers that are not for illumination purposes (columns 13,14). As to arguments to Teumim-Stone reference not showing an instrument for cutting, scraping and/or grinding and applying infrared laser energy, it is noted that Teumim-Stone shows the claimed contact region (shield) adapted for scraping (separating) the treated tissue (column 6 line 26).

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 571-272-4709. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached at 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in cursive script, reading "Melba Bumgarner".

Melba Bumgarner  
Primary Examiner